tain their natural position. Such a jar as is commonly used for the cultivation of seedlings answers well for this purpose. The sensitive paper can be fastened to the back of the jar by means of soft wax. The object should be exposed to strong sunlight, and a window should be chosen in which the direct rays can be reflected horizontally from a mirror upon the object, which in turn projects its shadow upon the sensitive paper. The object should be placed as near the paper as possible so that a well-marked shadow is obtained, and consequently a clearly defined print. From two to five minutes exposure in strong sunlight is sufficient to obtain a print, after which the paper should be treated to a water bath and dried in the usual way.— GEORGE E. STONE, *Leipzig.*

A new order of Schizomycetes.—The following should be substituted for lines twenty-two to thirty in the preceding number of this journal, p. 403.

Myxobacter aureus n. sp.— Plate XXV, figs. 34–36.— Colonies when rising to form cysts milky white. Rods large, cylindrical, rounded at either end, $4-7\times.7-.9\mu$. Cysts spherical or oblong, golden yellow, thick walled, one to twelve or more in number, distinct within a hyaline matrix, $75-350\times75-275\mu$. The encysted rods mingled with a yellow oily material. Cyst groups .7—1^{mm} long.

On very wet wood and bark, in swamps. Kittery Point, Me., Belmont, Mass.

Myxobacter simplex n. sp.— Rods as in *M. aureus*. Cysts solitary within a thin envelope, very large, irregularly rounded, bright reddish yellow, 250–400μ in diameter. The encysted rods flesh-colored in the mass and adhering in numerous elongate groups.

Occurring, sometimes with the last, in the same localities and habitat.

The two species above described are very common in the situations mentioned, being found most frequently on sticks lying in partly dry wood pools. In general appearance they greatly resemble a minute Trichia, and are conspicuous from their very bright color. The cysts or groups of cysts are never crowded, and are usually sparsely scattered over the substratum. Neither of these forms has been cultivated apart from its natural substratum. In *M. aureus* all stages of development have been obtained from the first appearance of the rising rod mass. The cysts are formed from this mass by a rolling together of the rods at certain points corresponding in number to the cysts to be produced. As the cysts roll themselves together, they become gradually separated from the hyaline matrix in which they are finally imbedded. The

cyst wall in both species is thick and clearly defined, the contents becoming contracted and clearly separated from it on the addition of glycerine or salt solution. The two species seem to be quite distinct, the reddish color and peculiar grouping of the cyst contents of *M. simplex* as well as its solitary habit being apparently constant characters.— ROLAND THAXTER, *Cambridge, Mass.*

EDITORIAL.

THE TIME is ripe for the establishment of a School of Botany in connection with some one of our large universities. In most of them, this great biological science is represented by a single man with or without assistance, and most of these men are considered fortunate that they are not compelled to teach zoology also. But in this respect there has recently been rapid improvement, and botany to-day stands fairly well differentiated. But we are now advocating further advance. The field of botany has become so vast that one man cannot stand for it all, and of necessity does injustice to the science and to his pupils. If a teacher is worth anything he is cultivating some one phase of the subject, and is impressing his pupils with the importance of that phase. The consequence is that our smaller colleges are being filled with botanists who know only one kind of botany, which is perfectly right and proper, and think every other kind of little or no consequence, which is by no means right and proper. These teachers lack a true perspective of their subject, and propagate the little dogmas of their training schools as persistently as do the religious sects their creeds.

IT IS THIS BROAD VIEW that was lost when botanists were compelled to specialize; and this view is to be restored by the establishment of schools of botany, in which, as in the Pantheon, all views are represented. It must not be supposed for a moment that we are advocating a diffusion of botanical training for the individual; but a student being trained in one department of botany can be made to appreciate the proper importance of other departments that are being cultivated about him. In addition to this a certain amount of elementary training in all the great departments is necessary, and this can be best directed by those who stand for these departments. It is urged that any good botanist can give a sufficient elementary training in the whole subject. We consider this to be a fallacy. It may be true for a a year or two after the teacher has passed from under the guidance of